III. REMARKS/ARGUMENTS

A. Status of the Application

Claims 1, 3-12, 14-16 and 18-24 are pending. Claims 1, 3, 5-10, 14-16, 18-19 and 23 have been amended. Claims 2, 13, 17 and 25-52 have been cancelled. The amendments to the claims and the cancellation of claims were not made in response to any rejections raised in the current Office Action. Rather, the amendments to the claims and cancellation of claims were made to enhance the Applicants' patent portfolio with claims of varying scope. Applicants' patent portfolio regarding the current subject matter is such that diversity of claims is commercially advantageous for the Applicants.

Reconsideration of claims 1, 3-12, 14-16 and 18-24 in light of the following remarks is respectfully requested.

B. Personal Interview Conducted on February 27, 2006

Applicants' counsel wish to thank Examiner Suchfield for his time and the courtesies extended during the personal interview conducted on April 12, 2006.

C. Affirmation of Election

The election without traverse to prosecute the invention of Group I, namely, claims 1–24 is hereby affirmed.

Claims 25-52 have been cancelled without prejudice or disclaimer and Applicants reserve the right to pursue the subject matter of claims 25-52 in one or more related applications.

D. Claims 3-12 Are in Condition for Allowance

As discussed during the personal interview conducted on April 12, 2006, original claims 3-12 were deemed allowable over the applied references. Accordingly, claim 3 has been placed in independent form and claims 4-12 have been amended to depend, directly or indirectly, from claim 3. Accordingly, it is respectfully submitted that claims 3-12 are clearly in condition for allowance.

E. Obviousness-Type Double Patenting

Claims 1-24 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-27 of copending U.S.

Patent Application No. 10/893,210 ("the '210 application"). This rejection is respectfully traversed.

In the event that the Examiner maintains the provisional obviousness-type double patenting rejection in this application, Applicants request that at such time that the provisional obviousness-type double patenting rejection is the only rejection remaining in this application, that the Examiner follow the direction provided in MPEP §804. Specifically, since this application is the earlier filed application of the two, the Examiner should withdraw the rejection in this application and permit this application to issue as a patent, thereby converting the "provisional" double patenting rejection in the '210 application into a double patenting rejection at the time this application issues as a patent. MPEP §804, p. 800-17.

F. Rejection under 35 U.S.C. §102(b)

Claims 1, 2 and 16-24 stand rejected under 35 U.S.C. §102(b) over U.S. Patent No. 5,637,556 to Argillier et al. ("Argillier '556"). Insofar as it may be applied to the present claims, this rejection is respectfully traversed.

Argillier '556 describes a process of completing a well wherein a spacer fluid is circulated in the well, in the customary manner of separating and/or displacing a fluid(s) from a well. The spacer fluid utilized comprises an exemplary hydrophilically-modified, water soluble polymer.

As provided in MPEP §2131, "[t]o anticipate a claim, the reference must teach every element of the claim...." Argillier '556 fails to meet the requirements of MPEP §2131 with respect to claims 1, 2, and 16-24 because Argillier '556 fails to teach or suggest each and every element of these claims.

Claim 1, as amended, is in independent form and is directed to a method of reducing the water permeability of a well bore in a formation. The method of claim 1 includes:

(a) introducing into the wellbore a treating fluid for separating a first fluid from a second fluid and for displacing the first fluid from the wellbore in advance of the second fluid, the treating fluid comprising a water soluble relative permeability modifier, wherein the water soluble relative permeability modifier comprises a hydrophobically modified water soluble polymer, the hydrophobically modified water soluble polymer being a reaction product of a

hydrophilic reactive polymer and a hydrophobic compound, wherein the hydrophobic compound comprises an alkyl halide; and

(b) allowing the treating fluid to enter the formation, thereby allowing the water soluble relative permeability modifier to be adsorbed into the formation, which adsorption causes a reduction in the water permeability of the wellbore without substantially reducing the hydrocarbon permeability thereof.

Claim 16, as amended, is in independent form and is directed to a method of reducing the water permeability of a well bore in a formation. The method of claim 16 includes:

(a) introducing into the wellbore a treating fluid for separating a first fluid from a second fluid and for displacing the first fluid from the wellbore in advance of the second fluid, the treating fluid comprising a water soluble relative permeability modifier, wherein the water soluble relative permeability modifier comprises a hydrophobically modified water soluble polymer, the hydrophobically modified water soluble polymer being a reaction product of a hydrophilic monomer and a hydrophobically modified hydrophilic monomer, and wherein the hydrophilic monomer is selected from the group consisting of N,N-dimethylacrylamide, vinyl pyrrolidone, dimethylaminoethyl methacrylate, dimethylaminopropylmethacrylamide, vinyl amine, trimethylammoniumethyl methacrylate chloride and hydroxyethyl acrylate, and

(b) allowing the treating fluid to enter the formation, thereby allowing the water soluble relative permeability modifier to be adsorbed into the formation, which adsorption causes a reduction in the water permeability of the wellbore without substantially reducing the hydrocarbon permeability thereof.

Claim 23, as amended, is in independent form and is directed to a method of reducing the water permeability of a well bore in a formation. The method of claim 23 includes:

(a) introducing into the wellbore a treating fluid for separating a first fluid from a second fluid and for displacing the first fluid from the wellbore in advance of the second fluid, the treating fluid comprising a water soluble relative permeability modifier, wherein the water soluble relative permeability modifier comprises a hydrophobically modified water soluble polymer selected from the group consisting of acrylamide/octadecyldimethylammoniumethyl methacrylate bromide copolymer, dimethylaminoethyl methacrylate/hexadecyldimethylammoniumethyl methacrylate bromide copolymer, dimethylaminoethyl methacrylate/vinyl pyrrolidone/hexadecyldimethylammoniumethyl

methacrylate bromide terpolymer and acrylamide/2-acrylamido-2-methyl propane sulfonic acid/2-ethylhexyl methacrylate terpolymer; and

(b) allowing the treating fluid to enter the formation, thereby allowing the water soluble relative permeability modifier to be adsorbed into the formation, which adsorption causes a reduction in the water permeability of the wellbore without substantially reducing the hydrocarbon permeability thereof.

The methods of claims 1, 16 and 23, as amended, are not disclosed, motivated or suggested by Argillier '556.

Rather, Argillier '556 describes a process for controlling the dispersion of cuttings in a water-base fluid used in a well for drilling, completion or workover operations. The process includes the addition of a hydrophilically-modified, water soluble polymer. The hydrophilically-modified, water soluble polymer results from the polymerization of hydrophilic units with a hydrophobic unit. The hydrophilic units include acrylamide according to a specific formula, acrylic acid and acrylate or sulfonate comonomers according to a specific formula. The hydrophobic unit of the polymer is at least one of N-alkylacrylamide, alkylacrylate, N-substituted acrylamide or a substituted acrylate, the substituted part being a nonionic surfactant.

Argillier '556, however, does not disclose or suggest a hydrophobically modified water soluble polymer made from a reaction product of a hydrophilic reactive polymer and a hydrophobic compound, wherein the hydrophobic compound include an alkyl halide according to claim 1. Argillier '556 also does not disclose or suggest a hydrophobically modified water soluble polymer made from a reaction product of a hydrophilic monomer and a hydrophobically modified hydrophilic monomer, wherein the hydrophilic monomer is selected from the group consisting of N,N-dimethylacrylamide, vinyl pyrrolidone, dimethylaminoethyl methacrylate, dimethylaminopropylmethacrylamide, vinyl amine, trimethylammoniumethyl methacrylate chloride and hydroxyethyl acrylate according to claim 16. Finally, Argillier '556 does not disclose or suggest a hydrophobically modified water soluble polymer selected from the group consisting of acrylamide/octadecyldimethylammoniumethyl methacrylate bromide copolymer, dimethylaminoethyl methacrylate/hexadecyldimethylammoniumethyl methacrylate bromide copolymer, dimethylaminoethyl methacrylate/vinyl pyrrolidone/hexadecyldimethylammoniumethyl methacrylate bromide terpolymer and acrylamide/2-acrylamido-2-methyl propane sulfonic acid/2-ethylhexyl methacrylate terpolymer.

In view of the foregoing, Applicants submit that Argillier '556 fails to meet the requirements of MPEP §2131 with respect to claims 1, 16 and 23 because Argillier '556 fails to teach every element of these claims. Accordingly, Applicants respectfully request that the rejection of claims 1, 16 and 23 under 35 USC §102(b) over Argillier '556 be withdrawn.

Claims 2, 18-22 and 24 depend directly or indirectly from claims 1, 16 and 23, respectively, and therefore include at least the same elements as claims 1, 16 and 23, respectively. Accordingly, Applicants request that the rejection of claims 2, 18-22 and 24 under 35 USC §102(b) over Argillier '556 be withdrawn for at least the same reasons as noted above with respect to claim 1, 16 and 23.

F. Rejection under 35 U.S.C. §103(a)

Claims 13-15 stand rejected under 35 U.S.C. §103(a) over Argillier '556 as applied to claim 1, and further in view of U.S. Patent No. 4,228,277 to Landoll ("Landoll '277"). Insofar as it may be applied to the present claims, this rejection is respectfully traversed.

Claim 1 has been amended to include the subject matter of original claim 13. Therefore, the rejection of claims 13-15 will be discussed herein as if it had been applied to claim 1 and 14-15. Claims 14-15 depend directly from claim 1, and therefore include at least the same elements as claim 1. Thus, each of claims 1 and 14-15 is directed to a method of reducing the water permeability of a well bore that includes:

(a) introducing into the wellbore a treating fluid for separating a first fluid from a second fluid and for displacing the first fluid from the wellbore in advance of the second fluid, the treating fluid comprising a water soluble relative permeability modifier, wherein the water soluble relative permeability modifier comprises a hydrophobically modified water soluble polymer, the hydrophobically modified water soluble polymer being a reaction product of a hydrophilic reactive polymer and a hydrophobic compound, wherein the hydrophobic compound comprises an alkyl halide, and

(b) allowing the treating fluid to enter the formation, thereby allowing the water soluble relative permeability modifier to be adsorbed into the formation, which adsorption causes a reduction in the water permeability of the wellbore without substantially reducing the hydrocarbon permeability thereof.

As discussed above with respect to the rejection of claim 1 under 35 USC §102(b), Argillier '556 fails to disclose, motivate, or suggest a hydrophobically modified water soluble polymer made from a reaction product of a hydrophilic reactive polymer and a hydrophobic compound, wherein the hydrophobic compound includes an alkyl halide according to claim 1.

Landoll '277 describes the formation of a hydrophobically-modified cellulose ether polymer or viscosifier by carrying out a reaction between the cellulose ether and an alkyl halide.

In order to make a proper rejection under 35 U.S.C. §103(a), it is required that the cited references disclose, motivate or suggest each and every element of the rejected claims. (See MPEP §2142). MPEP §2142 further requires "some suggestion or motivation, either in the [reference itself] or in the knowledge generally available to one of ordinary skill in the art, to modify [or combine] the reference", and also that there be a "reasonable expectation of success."

In the present case, none of the criteria for sustaining a rejection over Argillier '556 in view of Landoll '277 under 35 U.S.C. §103(a), have been satisfied with respect to any of claims 1 and 14-15.

Specifically, there is no disclosure, motivation or suggestion in Argillier '556 for a method of reducing the water permeability of a well bore in a formation by introducing into the wellbore a treating fluid that includes a hydrophobically modified water soluble polymer made from a reaction product of a hydrophilic reactive polymer and a hydrophobic compound, wherein the hydrophobic compound includes an alkyl halide according to claim 1.

While Landoll '277 describes the formation of a hydrophobically-modified cellulose ether polymer or viscosifier by carrying out a reaction between the cellulose ether and an alkyl halide, Landoll '277 does not disclose, motivate or suggest a method of reducing the water permeability of a well bore in a formation by introducing into the wellbore a treating fluid that includes a hydrophobically modified water soluble polymer made from a reaction product of a hydrophilic reactive polymer and a hydrophobic compound, wherein the hydrophobic compound includes an alkyl halide according to claim 1.

In view of the foregoing, Applicants respectfully submit that both of Argillier '556 and Landoll '277 fail to disclose each and every element of claim 1, and, therefore, a required element of a rejection under 35 U.S.C. §103(a) has not been met.

Further, Argillier '556 and Landoll '277 fail to suggest or motivate a modification of the respective disclosures so as to provide a method of reducing the water permeability of a well bore in a formation by introducing into the wellbore a treating fluid that includes a hydrophobically modified water soluble polymer made from a reaction product of a hydrophilic reactive polymer and a hydrophobic compound, wherein the hydrophobic compound includes an alkyl halide according to claim 1. None of Argillier '556, Landoll '277 and the current Office Action describe how a person of ordinary skill in the art could be motivated to modify the process of using a spacer fluid that includes an exemplary hydrophilically-modified, water soluble polymer as described by Argillier '556 or the hydrophobically-modified cellulose ether polymer described by Landoll '277 to provide the method of claim 1. Further, there could be no reasonable expectation of success of providing such a method from the disclosures of Argillier '556 and Landoll '277 for at least the reason that there is no suggestion or motivation for modification of the disclosures of Argillier '556 and Landoll '277. Moreover, a reasonable expectation of success for modifying an additive for a method of reducing the water permeability of a well bore in a formation as recited in claim 1 has not been provided. Accordingly, Applicants submit that Argillier '556 and Landoll '277 fail to satisfy the remaining requirements of a rejection of claim 1 under 35 U.S.C. §103(a).

In view of the foregoing, Applicants respectfully submit that none of the criteria for sustaining a rejection under 35 U.S.C. §103(a) have been satisfied with respect to claim 1. Moreover, none of the criteria for sustaining a rejection under 35 U.S.C. §103(a) have been satisfied with respect to claims 14-15 for at least the same reasons that apply to claim 1. For the foregoing reasons, Applicants submit that the present rejection of claim 1 under 35 U.S.C. §103(a) over Argillier '556 and Landoll '277 should be withdrawn. Applicants further submit that the present rejection of claims 14-15 under 35 U.S.C. §103(a) should be withdrawn for at least the same reasons that apply to amended claim 1.

E. Conclusion

It is believed that all matters set forth in the Office action have been addressed. Favorable consideration and allowance of the pending claims are respectfully requested. Should the Examiner deem that an interview with Applicants' undersigned attorney would expedite

consideration of the claims, the Examiner is invited to call the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

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